

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Clark T.-C. Nguyen, et al.

Group Art Unit:

Examiner:

Serial No.: 10/737,363

Filed: December 16, 2003

For: MICROMECHANICAL RESONATOR DEVICE AND
METHOD OF MAKING A MICROMECHANICAL DEVICE

Attorney Docket No.: UOM 0285 PUSP

INFORMATION DISCLOSURE STATEMENT

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In compliance with the duty of disclosure under 37 C.F.R. § 1.56 and § 1.97-1.98, the references listed and identified on the attached Forms PTO/SB08A and/or SB08B are being submitted herewith for consideration by the Examiner.

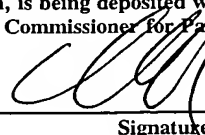
While this Statement is being filed in compliance with the duty of disclosure, citation of the attached references is not to be construed as an admission that any of the reference(s) are "material" as defined under 37 C.F.R. § 1.56(b).

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If the filing date of this application is on or before June 30, 2003, a copy of each reference listed on the attached Forms PTO/SB08A and/or SB08B is included herewith. If this application was filed after June 30, 2003, copies of any cited U.S. patent/application references have not been included. Consideration and entry into the record of these references is respectfully requested.

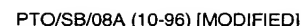
Respectfully submitted,

Clark T.-C. Nguyen, et al.

By: 
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Date: March 24, 2004

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Substitute for Form 1449A/P

(use as many sheets as necessary)

Complete if Known

Application Number	10/737,363
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Filing Date	December 16, 2003
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First Named Inventor	Clark T.-C. Nugyen, et al.
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Group Art Unit

Examiner Name

Attorney Docket Number	UOM 0285 PUSP
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¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

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			Application Number	10/737,363	
			Filing Date	December 16, 2003	
			First Named Inventor	Clark T.-C. Nguyen, et al.	
			Group Art Unit		
			Examiner Name		
Sheet	2	of	3	Attorney Docket Number	UOM 0285 PUSP

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		NGUYEN, CLARK, T.-C., Microelectromechanical Components For Miniaturized Low-Power Communications, Proceedings, 1999 IEEE MTT-S International Microwave Symposium RF MEMS Workshop, Anaheim, California, June 18, 1999, pp. 48-77	
		NGUYEN, CLARK, T.-C., Micromechanical Circuits For Communication Transceivers, Proceedings, 2000 Bipolar/BiCMOS Circuits and Technology Meeting (BCTM), Minneapolis, Minnesota, September 25-26, 2000, pp. 142-149	
		TANG, WILLIAM C., ET AL., Laterally Driven Polysilicon Resonant Microstructures, Sensors and Actuators, Vol. 20, 1989, Abstract only	
		NGUYEN, CLARK, T.-C., An Integrated CMOS Micromechanical Resonator High-Q Oscillator, IEEE Journal of Solid-State Circuits, Vol. 34, No. 4, April 1999, pp. 440-455	
		WANG, KUN, ET AL., High-Order Medium Frequency Micromechanical Electronic Filters, IEEE, Journal of Microelectromechanical Systems, Vol. 8, No. 4, December 1999, pp. 534-557	
		BANNON, FRANK D., ET AL., High-Q HF Microelectromechanical Filters, IEEE Journal of Solid-State Circuits, Vol. 35, No. 4, April 2000, pp. 512-526	
		LEE, SEUNGBAE, ET AL., A 10-MHz Micromechanical Resonator Pierce Reference Oscillator for Communications, Digest of Technical Papers, Transducers 2001, Munich, Germany, June 10-14, 2001, pp. 1094-1097	
		CLARK, JOHN R., ET AL., High-Q VHF Micromechanical Contour-Mode Disk Resonators, Technical Digest, IEEE Int. Electron Devices Meeting, (IEDM), San Francisco, California, December 11-13, 2000, pp. 493-496	
		WONG, ARK CHEW, ET AL., A Bonded Microplatform Technology for Modular Merging of RF MEMS and Transfer Circuits, Digest of Papers Int. Conf. on Solid-State Sensors and Actuators, Transducers 2001, June 10-14, 2001	
		ABDELMONEUM, MOHAMED A., ET AL., Stemless Wine-Glass-Mode Disk Micromechanical Resonators, Digest of Papers Int. Conference of Microelectromechanical Systems (MEMS 2003), January 2003, Kyoto, Japan, pp. 698-701,	

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		HSU, WAN-THAI, ET AL., A Sub-Micron Capacitive-Gap Process For Multiple-Metal-Electrode Lateral Micromechanical Resonators, Technical Diges, IEEE Int. Micromechanical Systems Conf., Interlaken, Switzerland, January 21-25, 2001, pp. 349-352	
		WAKE, R. N., ET AL., Changes In The Natural Frequencies of Repeated Mode Pairs Induced By Cracks In A Vibrating Ring, IEEE Journal of Sound and Vibration, Vol. 214, No. 4, November 1998, pp. 761-770	
		DEMIRCI, MUSTAFA U., ET AL., Mechanically Corner-Coupled-Square Microresonator Array For Reduced Series Motional Resistance, Digest of Papers Int. Conf. on Solid-State Sensors and Actuators, Transducers 2003, June 8-12, 2003	
		CLARK, JOHN R., ET AL., High-Q UHF Micromechanical Radial-Contour Mode Disk Resonators, submitted for publication in IEEE Journal of Microelectromechanical Systems on April 29, 2003, pp. 1-10	
		FUJITA, T., ET AL., Disk-Shaped Bulk Micromachined Gyroscope With Vacuum Sealing, Sensors and Actuators, Vol. 82, May 2000, pp. 198-204	

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